JPRS L/9231

4 August 1980

East Europe Report

ECONOMIC AND INDUSTRIAL AFFAIRS

(FOUO 6/80)

FBIS FOREIGN BROADCAST INFORMATION SERVICE

NOTE

JPRS publications contain information primarily from foreign newspapers, periodicals and books, but also from news agency transmissions and broadcasts. Materials from foreign-language sources are translated; those from English-language sources are transcribed or reprinted, with the original phrasing and other characteristics retained.

Headlines, editorial reports, and material enclosed in brackets [] are supplied by JPRS. Processing indicators such as [Text] or [Excerpt] in the first line of each item, or following the last line of a brief, indicate how the original information was processed. Where no processing indicator is given, the information was summarized or extracted.

Unfamiliar names rendered phonetically or transliterated are enclosed in parentheses. Words or names preceded by a question mark and enclosed in parentheses were not clear in the original but have been supplied as appropriate in context. Other unattributed parenthetical notes within the body of an item originate with the source. Times within items are as given by source.

The contents of this publication in no way represent the policies, views or attitudes of the U.S. Government.

For further information on report content call (703) 351-3060.

APPROVED FOR RELEASE: 2007/02/08: CIA-RDP82-00850R000300020003-3

JPRS L/9231

4 August 1980

EAST EUROPE REPORT

ECONOMIC AND INDUSTRIAL AFFAIRS

(FOUO 6/80)

CONTENTS PAGE

INTERNATIONAL AFFAIRS

DEVELOPING OPTIMUM PRODUCTION CAPACITIES IN CEMA VIEWED

Bratislava EKONOMICKY CASOPIS in Slovak No 3, 1980 pp 223-235

[Article by Alexander Belovic: "Creating Optimal Productive Capacities as One of the Directions in Coordinating the Investments of CEMA Countries:]

[Text] 1. The Level of Production Concentration as an Indication of the Degree of Development of Productive Forces.

The objective process of the growth of productive forces is evinced in the economic development of all countries in the form of two tendencies: diversification and concentration of production.

Diversification of production means the continual expansion of the list of products produced and used, and the shortening of the time taken to renew the assortment of products, which is a result of technological progress focused on meeting ever-increasing demands. Scientific discoveries and inventions and technological improvements strengthen the process of diversifying production, expand the list of products manufactured, provide the incentive for creating new industries and change individual technical stages into independent industries. At the same time, it must be clear that all countries do not have realistic possibilities for rapidly and efficiently providing for the production of the entire range of products manufactured throughout the world.

The need to increase the effectiveness of social production makes it economically and technologically indispensible to concentrate production and to increase the unit capacity of machines and assemblies.

When we talk about concentrating production, what we have in mind in the concentration of output, tools and machinery and manpower in progressively larger production units. The centralization of production, in contrast to the concentration of production, means increasing the capacity of certain larger production units [celky] by organizationally combining smaller production units [jednotky].

The major requirement of the law of the concentration of production, which was discovered by Karl Marx, is to achieve in every period of the

development of productive forces the magnitude of output that assures the highest technological-organizational level of output and that makes it possible to achieve its maximum economic effectiveness.

The creation of massive scientific-industrial complexes, the development and utilization of the most effective technological processes and forms of organizing work make the problem of the growth of the magnitude of productive capacities one of historic importance, for only on the basis of such growth can socialism effectively develop its own unique forms for uniting science and production. At the same time, we note that concentrating production should in no case prevent the individual countries in CEMA from responding promptly to changes in scientific-technological progress and demand on the national and the international levels, which should be achieved by a suitable combination of large and smaller enterprises.

What are the advantages and the disadvantages of large and of smaller enterprises? The advantages of large enterprises over small ones consist in the following:

--large enterprises can take advantage of mass production, with which are associated comparatively lower production costs, partly achieved by rationalizing production up to the point of automation, and partly due to the significant savings that can be realized in overhead costs by better utilizing auxilliary workers, etc;

--they have greater potentials for specializing and standardizing production;

--it is easier to provide for research and development facilities in them, which makes it possible for them to incorporate advances made in science and engineering and the latest technological processes;

--conditions are better for the thrifty and comprehensive use of raw materials, semiprocessed materials and energy, for transporting them more efficiently, as well as for increasing the effectiveness of financial resources;

--they assure a more rapid replacement of fixed assets, since they can more easily create larger volumes of their own financial means;

--they better help in more rapidly developing the infrastructure (at the same time, it can happen that this will entail higher capital investments per unit of production than in smaller enterprises).

The operation of the law of the concentration of production in industries making use of high-capacity aggregates results not only in a tendency toward increasing enterprise size, but makes it possible to lower the cost per unit of output, thereby increasing the economic effectiveness of social production.

In proof of this assertion we cite the following examples. "The construction of a 500-megawatt generating plant is some 30 percent less expensive than the construction of three 200-megawatt generating plants." (1, p 18)

"In the petrochemical industry, doubling the capacity of every plant decreases standard capital investment costs by 20 to 25 percent and doubles labor productivity. The construction of a plant to produce synthetic ammonia having a total capacity of 800,000 tons annually and units of 200,000 tons each is approximately 26 percent cheaper than constructing a plant of the same total capacity but with 100,000-ton units." (2, p 143)

"By the end of the 1960's the following relationship in the production of passenger cars had developed between the number of cars manufactured and in-house costs (3, p 27):

Number of Cars Manufactured Annually	Cost per Car (in Percent)
1,000	100
10,000	40
100,000	25
250,000	18
1,000,000	14

These examples convincingly demonstrate some of the advantages of large productive capacities is most evident in those industries where the technical and technological conditions of production make it possible to increase the unit capacity of aggregates to a large extent. At the same time, we must see that not every increase in the production of final products is automatically accompanied by a decline in production costs. Lowering them substantially is possible only when the change in the volume of units and components produced is so great that it becomes possible to employ a fundamentally different technology and the corresponding system of machinery.

The concentration of production is not a straight-line process for which only a growth trend is typical. Different avenues of technological advance or changes in demand create possibilities for efficient small and medium-sized plants. In the future development of the concentration of production, small and medium-sized enterprises will continue to exist with some certain degree of independence, these enterprises being the indispensible complement of large enterprises. Their raison d'etre is often the production of special, nonstandard products, or production for the local market when freight costs for transporting products from large-scale production facilities would be disproportionately high.

The advantages of smaller plants as compared to enormous productive capacities are chiefly these:

--readiness and adaptability to diverse demands;

--lower transportation costs in marketing products;
--the need for lower capital investments, smaller manpower, water and other raw material and energy resource requirements.

Small productive capacities can sometimes be more effective than large manufacturing plants, as is attested by the following examples:

"The occurrence of a relatively large number of medium-sized and small firms in the United States is the result of the specific organization of production in a number of industries having a higher level of specialization than in the USSR. For example, engineering in the United States shows much greater subassembly and technological specialization than in the USSR.

"Smaller firms in the United States that specialize in the production of components and parts are highly mechanized and fulfill their function as a part of the whole in the manufacture of machinery by supplying assembly plants with their products. They are often branches of large firms or corporations and work to their orders." (4, p 58)

"Very large enterprises, the giants of Soviet industry, in some sectors of the economy have worse technical-economic indicators than smaller enterprises. In engineering this is caused by concentrating disparate and unrelated products in some enterprises and also by the low level of development of unit and technological specialization. The advantages to be gained by increasing the size of enterprises, for example by the increase in the number of similar assemblies and types of equipment, are not always large enough so that using them can offset the effects of the territorial factors of dispersion and concentration of production." (4, 196)

The coexistence of large, medium-sized and small enterprises can thus be observed in the industrially most highly developed countries. Accordingly, the optimum concentration of production must be understood, within the framework of a given state or community of states, as the optimum coordination of large, medium-sized and small enterprises that share in the production of the same final products on the basis of the intensification of specialization and cooperation among them.

2. Defining the Concept of Optimum Productive Capacity

Centralizing production does not automatically lead to an increase in the size of unit productive capacities. This increase comes only as a consequence of employing modern techniques and technology, progressive methods of organizing work and a number of other factors. The most effective use of technology requires that its specifications correspond to the optimally great productive capacities, which are not always identical to the maximum possible concentration of production.

By optimum capacity we undersaand that volume of output, expressed in the appropriate units, that at a given time makes it possible to satisfy to the

greatest extent the needs of the entire society (of a specific state or community of states, or of the entire world) with the highest productivity of labor and the minimum total social costs per unit of output (including costs for transportation, warehousing, operation, service, as well as total capital investments). A key requirement in determining the optimum productive capacity for a particular type of product is the adoption of an international, a worldwide standpoint in comparing the criteria mentioned above.

By optimal productive capacity we do not mean only a plant considered in isolation, constructed "in a green meadow"; it can also mean a complex of plants, coordinated by means of plans and closely cooperating although separated by various distances (including the possibility of their being in different countries) and their combined output.

The determination of optimum productive capacity is influenced by many factors, chiefly: the needs of the state (community of states, world market) and the potential for marketing the products on the world market[1]; the level of the techniques, technology and organization of production; the level of various costs; the technical-economic level of the products, the social or international division of labor in science, technology and design and construction work in the production of the product; social and military-political factors. Some of the factors (needs, techniques, technology, organization of production, level of the international division of labor and others) have an effect on the growth of productive capacity and some of them (for instance, preparatory costs, certain social and military-political factors, etc.) can even put the brakes on the growth of the size of productive capacities.

As is well known, for every industrial sector of the economy and for every stage of technological progress there are characteristic optimum and minimum economic sites of productive capacities. The efficient use of high-capacity machinery cannot be assured when the sizes of productive capacities are smaller than the economic minimum.

We note that the creation of optimum productive capacities in the raw materials sectors is of a different nature than in processing. In the first case, these depend chiefly on the occurrence of natural resources in a given area in a quantity that enables a unit of the raw material to be extracted at minimal cost while meeting the needs of the countries with which the state, the owner of the raw materials, has a prime interest in cooperating. In the raw material industries, the optimum productive capacities are embodied in one extractive plant. In the processing industries, the optimum productive capacities can be created not only by building one plant but through close production cooperation among a number of plants, it being possible for these to be located in different countries.

The dynamism of the concept of optimum productive capacities is subject to the concrete conditions of production in its various sectors, constant

changes in the development of science, technology, the raw material base, etc. By optimum is meant that volume of productive capacities that assures the minimum social cost to produce the product and to deliver it to its users. The optimum size of capacities accordingly depends primarily on such factors as the techniques and technology of production, the condition of the raw material base and the specificity of its development in a given area, the magnitude of consumption [demand], the social organization of production--its location, specialization, cooperation and association with respect to the concentration of production, the transportation factor, etc. All these factors are historically variable, changing with time, so that the process of the development of production is based on the implementation of technological development, in conjunction with which the forms of the organization of social production also change. The degree to which the increase in the size of production units depends on technical and technological development in industry is differentiated. In some branches of industry the size of productive capacities is determined by the increase in the capacity of machinery and equipment or technological complexes.

The following examples attest to the changes in views on the optimum size of productive capacities:

"Ten or 20 years ago, the optimum size of a truck manufacturing plant was considered to be one with a capacity of 15,000 to 20,000 vehicles a year; currently the figure is 200,000 a year.

In the early 1960's, the optimum size for an ethylene plant was one with a capacity of 60,000 tons a year; now plants producing 10 to 17 times this amount are considered optimal." (5, p 21)

"According to expert opinion, a plant annually turning out between 300,000 and 600,000 passenger cars is considered profitable. The optimum capacity for a steel foundry should be 7 to 8 million tons of steel a year. In just the last 10 years, the optimum series size for ball bearings has increased by a factor of between 5 and 8 in CEMA countries; in the manufacture of electric motors with an output of up to 10 kilovolts the figure is 3.5, for generators 3, etc." (6, p 15)

3. The Current Situation in Developing Optimum Productive Capacities in CEMA countries.

Capital investment per capita in CEMA countries is, in comparison with other industrially developed countries, relatively quite high, but the economic effectiveness of these investments often lags behind the level attained in those countries, to which indirectly attest the data on average kilogram prices in dollars commanded by, for instance, Czechoslovakia.[2]

One of the major causes of this situation is the nonoptimum size capacities in CEMA countries, as a result of which the desired technical and economic parameters of products are not achieved.

A comparison of economically minimum capacities for specialized types of engineering with the actual state shows that even in the USSR the volume of output is in many cases much lower than is economically effective.

"The optimum magnitude of output of a specialized plant equipped with the most modern technology for manufacturing transformers in the first size category is 1.5 million kWA annually. The actual need for them in 1970 (in millions of kWA) was as follows: in Bulgaria, 0.11; in CSSR, 0.09; in Hungary, 0.084; in the GDR, 0.323; and in Poland, 0.18, the total of which is approximately half of the optimum capacity for a plant manufacturing transformers." (8, p 66)

"According to calculations made by scientists in the GDR, 'in the metal-working industry in the GDR, only 20 to 50 percent of the volume of output that can be considered optimum has been achieved in the manufacture of many products.' " (9, 187)

"In 1976, the production of passenger cars was as follows (in thousands of vehicles: in the USSR, 1,265 (five makes of passenger cars, of which one, the Lada, achieved the optimum magnitude); in Poland, 216; in the CSSR, 180; in the GDR, 164; in Romania, 71' and in Bulgaria, 15. For the sake of comparison we present the quantities of passenger cars manufactured in 1976 in some capitalist countries (in thousands of vehicles): United States, 8,498; Japan, 5,028; FRG, 3,547; France, 2,980; Italy, 1,471; England, 1,333; and Sweden, 317." (10, p 333)

From the data above, it follows that in the CEMA countries (sometimes not counting the USSR) productive capacities are frequently below the level of optimum capacities. Using the available statistical yearbooks of the CEMA countries, it could easily be shown that the production of the vast majority of products in these states is essentially intended only for internal consumption. Indirect evidence of this fact is that the difference between the indicator of the share of the socialist community in worldwide industrial output (approximately 33 percent) and that of their share in world trade (approximately 9 percent), which also attests to a low degree of participation in the international division of labor. The USSR has a predominant effect on this ratio: its share of world industrial output is 20 percent and it is essentially independent, because it does feel the necessity of integrating itself into the international division of labor to the extent that smaller countries do. (The indicators mentioned above in the CSSR are 1.6 percent [share of world industrial output] and 0.9 percent [share of world trade]) which is in line with the overall situation in CEMA and causes the development of productive capacities of nonoptimum sizes.)

Todor Zhivkov first secretary of the Central Committee of the Bulgarian Communist Party, writes for example: "We must unhesitatingly eliminate from production those products whose large-scale and efficient production

Bulgaria cannot assure and concentrate our efforts on a limited number of high-quality products." (11, p 3)

The former Hungarian permanent representative to CEMA, P. Vaji, says the following: "The capital investments made by Hungary, with its population of 10 million, often are not at the level necessary for developing production with a technology assuring a high level of labor productivity.... In the majority of engineering sectors, in metallurgy, as well as in other branches of the economy, it is necessary to produce more than is needed to meet domestic requirements in order to achieve a higher rate of production profitability. In these cases, it is necessary to decide upon one of two alternatives: either increase output and designate a portion of the products for international exchange, or cease production and satisfy domestic needs through imports." (12, p 3)

In the report on the Activity of the Party and the Development of Society after the 13th CPCZ Congress and Other Tasks of the Party, presented by Comrade Husak, the following is noted: "Scientific-technological progress will exert ever-stronger pressure to concentrate production. It will require that products of high technological level and use value be produced in large quantities and at low cost. Contemporary scientific-technological development depends on creating suitable conditions, chiefly on the size of capacities, the extent of output, the diversity of assortment and marketing possibilities. No small, or today even nedium-size, country can create these conditions by itself. The only way to overcome the limited size of our domestic market and internal reserves in dealing with new tasks is to develop the international division of labor. This accordingly plays an irreplaceable role in the transition to more intensive development. We have been aware of this theoretically for a long time. But we constantly encounter attempts to 'produce it oneself,' cost what it may. Some three-quarters of the machinery we install we manufacture ourselves. In other comparable countries the figure is between 25 and 50 percent. This result in inevitable technological and economic lags, rising costs and export problems." (13, pp 33, 42)

How can we, very briefly, assess the efforts of the CEMA countries to create optimum productive capacities at the present time? In the interest of more effectively providing for their long-term needs, chiefly in raw materials and the important semiprocessed materials, multilateral cooperation among the CEMA countries began to expand after 1971, partly in the form of the joint construction of selected capacities built through the united efforts of the affected states of the socialist community on a multilateral basis, partly in the form of multilateral international specialization and cooperation in production.

In the years 1972-1975, 10 multilateral framework agreements were concluded (they are listed in the Agreed-upon Plan of Multinational Integrating Measures of the CEMA Member States for 1976-1980. These agreements focused on the cooperation of CEMA countries in building 10 additional facilities,

7 of which are being built to meet the long-term raw materials needs of these states. The available data testify to the fact that these capacities are of the optimum size in terms of the socialist community and on the worldwide scale are among the giants in the given types of projects.[3]

The joint construction of selected capacities has focused primarily on the raw materials industries, since sources of these are distributed very unevenly and the capital investment requirements are several times greater than for projects for the processing industries, regardless of the size of the extractive works. The objective conditions for building optimum capacities in manufacturing industries do not exist in the CEMA countries, primarily because of the small size of the domestic market. At the same time, the costs for building optimally large capacities in the processing industries are also exceptionally great, and funding them is regarded, by among other things, unresolved problems in the area of commodity-money relations and legal instruments, as well as by surviving tendencies toward autarky in some of the CEMA countries.

Favorable conditions for expanding and intensifying the coordination of capital investments in CEMA countries through joint construction on a multilateral basis are being created by the formulation and implementation of long-term target programs in cooperation, which constitute a program of measures for dealing with the most important problems inherent in the development of the economy of the states of the socialist community through 1990. These programs are correlated with respect to goals, resources, time limits and implementors.

Programs of cooperation in long-term goals establish a coordinated strategy of cooperation among countries for the long term in the pertinent areas of physical production. On the basis of such programs, multilateral and bilateral agreements are concluded with specific commitments for implementing the goals and measures contained in these programs. Examples of these are multilateral specialization and cooperation in production agreements, the exchange of some types of goods on the basis of equivalency (arising from material, capital investment and other requirements), and the coordination of capital investments of the interested CEMA countries. What will be important here is chiefly that the productive capacities either be built of optimum size or that they be made an integral component of optimally large capacities, not from the point of view of one country, but of the entire socialist community. Especially important in enabling these conditions to be met are the following:

--applying and rationally utilizing the most modern techniques and technology of production, thereby also increasing the effectiveness of production throughout the entire socialist community;

--guaranteeing that the needs for the most important types of products over the long term from within the socialist community will be met;

--jointly using the physical and financial resources in the interest of increasing the effectiveness of social production in the individual CEMA countries and throughout the entire socialist community;

--equalizing the economic level of the CEMA countries by locating some optimally large productive capacities in states that are less developed industrially, or through the participation of such countries in developing optimally large capacities in the form of international cooperation in production.

What could have the greatest effect on the development of optimum productive capacities in the processing branches of the CEMA countries is the effective development of multilateral specialization and cooperation in production among these countries, such production being the material basis for the integrating processes in the socialist community. This began to develop only after the adoption of the Comprehensive Program of International Socialist Economic Integration. (By 31 December 1978 the CEMA countries had concluded among themselves 99 agreements on multilateral specialization and cooperation in the production of machinery, equipment and products for the branches and sectors of the processing industry.)

In spite of the indisputable successes that the CEMA countries have achieved in this area in recent years, there still exist numerous problems. One of these is that many specialized producers do not completely meet the demands of their CEMA contractual partners, with the result that either production recommences in those countries (leading to a lower level of concentration of production), or imports from capitalist countries are expanded, which does not contribute to decreasing the relatively great dependency of the states of the socialist community on imports of technology from the capitalist states. A further problem in this area is that productive capacities built in CEMA countries on the basis of multilateral agreements on specialization and copperation in production do not attain the optimum size for the given product.

4. Methods of Developing Optimum Productive Capacities as an Important Direction in Coordinating Capital Investments in CEMA Countries.

The number of optimum productive capacities in a country depends principally on the economic strength and degree of development of the types of products involved and of the national economy as a whole (great possibilities for capital investments and a significant scientific-technological and industrial potential). Consequently, a prerequisite for building optimum productive capacities in the CEMA countries, except for the USSR, is restricting the range of products presently being manufactured, primarily for the domestic market.

It is evident that for some kinds of products (as a rule, not consumer goods) intended for only domestic consumption special conditions may obtain

in every socialist country, when productive capacities of less than optimum size are still efficient enough. Nevertheless, in the context of the intensifying international division of labor, where states are striving to produce not only enough to satisfy domestic requirements but for foreign customers as well, the effect of specific national conditions on the product in question declines. Accordingly, the size of these capacities should approach the optimum or be a component of optimum capacities.

Developing productive capacities of optimum size is of particular importance for the small and medium-size CEMA countries. It is known that efficiently implementing the findings of science and technology and providing for the production of a constantly lengthening list of products requires mass production, which frequently runs up against the problem of the limited market in these countries. The needs of their domestic markets for a number of products are considerably less than the output that the lowest production costs provide using current technology.

The disparity between the rapid increase in the diversity of products, which is accelerated by their mass production and technological level, and the objective limits to the concentration of production, as well as discrepencies between the overall domestic requirements of the countries, can be eliminated only by means of the international division of labor (especially socialist labor), which creates the basic possibilities for organizing highly concentrated production.

Concentration and specialization in production and in science within each country and within CEMA as a whole are the factors that, in creating the structure of the national economy, have the greatest unused potential for further increasing the effectiveness and rate of growth of physical production. In the process of intensifying international socialist economic integration, these factors can exert a great influence on the efficiency of social production throughout the entire socialist community, because developing optimally great productive capacities in social production makes it possible to produce cheaper, higher-quality goods.

As the degree of the development of productive forces in CEMA countries increases, the question of optimizing production relative to international costs per unit of output achieved in the industrially most highly developed states will assume ever-greater importance. In order to achieve savings in production costs, productive capacities must be developed in every country that are of optimum size or are a component of an optimum productive capacity developed within the framework of the socialist community. This will help increase the effectiveness of social production in these countries and at the same time eliminate the differences in the economic levels of the states of the socialist community.

The process of equalizing the economic levels of the CEMA countries could be accelerated by their participating in developing optimally large productive capacities, by which means the following would be achieved:

--an increase in the effectiveness of social production throughout the entire socialist community, and consequently also in the less-developed CEMA countries;

--supplies of the most important products would be assured over the long term for CEMA countries, essentially from the internal reserves of the socialist community, which would also lead to the more rational use of resources in the industry of the less-developed CEMA countries.

Developing optimally large productive capacities can also have a positive effect on the formulation of effective and mutually complementary structures for the national economies of the CEMA member states.

Increasing multilateral specialization and cooperation in production among the CEMA countries helps to increase the concentration of the means of production and manpower, to increase series production, and thereby produces productive capacities of optimal size. The converse also holds: an increase in the concentration of production in a country helps to intensify its participation in the international socialist division of labor.

Between the increase in the concentration of production achieved by optimum productive capacities and the international division of labor the following relations exist:

--productive capacities of optimal size make it possible to rationally use the most advanced techniques and technology of production, if the marketing of the products in the other CEMA countries is provided for;

--taking advantage of favorable economic and natural and preparatory conditions in site location selection for these capacities affects minimum costs;

--the possibility arises of jointly utilizing material and financial resources and manpower when necessary to improve the relation between "cost and results."

Multilateral specialization and cooperation in production achieved by creating productive capacities of optimum size should be organized only on the basis of the most modern technology. This is objectively indispensable and possible in every branch of industry and in every type of production where new technology is being introduced. This also applies to the international communalization of production and the development of multilateral international socialist economic integration in the "traditional" branches of industry: fuels and power, raw materials, textiles, machine building for textiles and food processing, etc.

Developing optimum productive capacities in CEMA countries is also an important accelerating factor for developing integrating processes. This is

a consequence of the fact that with the growth of procuctive capacities, there is also expansion in the size of those areas which these capacities require as their economic "hinterland," their market, needed to absorb their products. Optimum productive capacities require a large marketing sphere, stable and accessible without hindrance.

In planning structural changes in production, the appropriate state and economic agencies of the CEMA countries should base their work on multilateral specialization and cooperation in production and the coordination of the capital investments involved that lead to raising the level of the concentration of production in the processing industries within individual countries.

Developing optimum productive capacities is in the international interests, both national and communal, of the CEMA countries, because in view of the enormous funds necessary to build them it encourages these countries to combine in the optimal way and use in the most efficient way the natural, material, investment, financial, labor, scientific-technological and productive resources of the states of the socialist community. In this way the building of optimum productive capacities in the socialist community is also a coordination of capital investments of CEMA countries that can be implemented in various forms:

--without flows of investments from one state to another to be achieved either by the individual CEMA countries dividing among themselves the responsibility for meeting long-term requirements of the socialist community for particular goods using the resources only of the countries in which they will be built, or by individual CEMA countries undertaking to provide only specific subassemblies, parts, and components to meet the needs of their partner countries and their own needs by cooperating in deliveries of these among the countries concerned, while the capital investments needed to build capacities under such cooperation agreements are provided from the resources of these countries;

--with flows of capital investments, either by individual coumtries providing loans to the country building a specific optimum capacity, these capacities remaining in the ownership of the country in which they are built, or by the states of the socialist community building the capacities as international joint enterprises.

Motivating the construction of optimal sizes of output is one of the conditions for a more rational allocation of production programs in CEMA, and thereby for the intensification of multilateral specialization and cooperation in production, which makes possible the further increase in the economic effectiveness of capital investments in CEMA countries. Therefore, comparing the optimum sizes of productive capacities--determined on the basis of technical, technological and economic optima--with the existing volumes of output in CEMA countries is also a possible means of uncovering

reserves for further enhancing processes of international socialist economic integration, and thereby also for increasing the economic effectiveness of social production in the states of the socialist community.

FOOTNOTES

1. Some economists maintain that the size of the market for creating optimum capacities should be 150-200 million persons, which of course encompasses the classification of productive requirements in addition to that of private requirements. The size of the market for different products is not the same. Similarly, the necessary concentration of production for different use values is different.

2. "Exports in the machine-building industry to the EEC in 1975 commanded approximately 38 percent of the dollar price per kilogram of the world average. Of the socialist states, Hungary and the GDR command the highest kilogram prices." (7, p 38)

3. What are alluded to are especially the Kijembayesky combine for mining and processing 500,000 tons of asbestos, a combine for producing 500,000 tons of sulphate pulp in Ust'-Ilim, the long-distance natural gas pipeline from Orenburg to the western border of the USSR, the construction of facilities to produce 60,000 tons of nickle and cobalt in Cuba, etc.

4. For example, the production of Tatra trucks following the expansion of production to 15,000 vehicles a year (made possible by the agreement on multilateral specialization and cooperation in the automotive industry of the CEMA countries of 23 September 1971) will reach only 10 percent of the optimum productive capacities for trucks, which is 150,000 to 200,000 vehicles a year.

5. Developing productive capacities of optimum size in the socialist community is contingent first of all upon knowing their technical-economic parameters. In this area, unfortunately, there is little data. (Some positive data in the area have been obtained by the working bodies of the permanent CEMA commission on the chemical industry.) In the interest of substantially improving the economic effectiveness of capital investments and thereby of social production in CEMA countries as well, as consider that it would be practical to work out in detail, within the individual CEMA permanent commissions in the area of the productive sphere, parameters for the optimum size of productive capacities, which should take into consideration the most recent discoveries of the worldwide science and technology. In this direction, Czechoslovak representatives to the pertinent CEMA bodies should exercise greater initiative in the interest of increasing the level of the concentration of production in the CSSR.

BIBLIOGRAPHY

1. Kishsh, T.: "Osnovnye problemy obespecheniya syryom v oblasti kapital' nykh vlozheniy v integratsii SEV" [Basic Problems in Providing Raw Materials in the Area of Capital Investments in the Integration of CEMA]. From the theses of a presentation given at a symposium in Moscow on "Current Problems in the Integration of the Socialist Countries." Moscow, October 1971.

2. Poltorygin, V. K.: "Zakon Kontsentratsii Proizvodstva i Tendentsii Vosproisvodstva osnovnych fondov" [The Law of the Concentration of Production and Trends in the Reproduction of Fixed Assets]. IZVESTIYA ADADEMII NAUK SSSR, SERIYA EKONOMICHESKAYA, No 4, 1971.

3. VNESHNAYA TORGOVLYA SSSR, No 7, 1970.

4. Livshits, R.S.: "Effektivnost' kontsentratsii proizvodstva v promy promyshlennosti" [The Effectiveness of Concentrating Production in Industry], Moscow NAUKA, 1971.

5. Faddeyev, N. V.:: "Soviet ekonomicheskoy vzaimopomoshchi" [The Council of Economic Mutual Assistance], Moscow, EKONOMIKA, 1974.

6. Pugachev, B. M.: "Internatsionalizatsiya proizvodstva i sotsialisticheskaya integratsiya" [The Internationalization of Production and Socialist Integration] Moscow, Nauka, 1975.

7. Rohlicek, R.: "Dalsie prehlbovanie spoluprace CSSR so Sovietskym zvazom a ostatymi krajinami v ramci RHVP." [Further Intensification of Cooperation between the CSSR and the Soviet Union and the Other CEMA Countries], in K 30. vyroci zaloneni RVHP [Materials from the nation-wide seminar of the CPCZ Central Committee held on 13 December 1978 in Prague) Published by the CPCZ Central Committee's Department of Propa-ganga and Agitation.

8. Karlik, E.: "Kontsentratsiya proizvodstva v usloviyakh mezhdunarodnogo sotsialisticheskogo razdeleniya truda" [The Concentration of Production under the Conditions of the Socialist Division of Labor]. VOPROSY EKONOMIKY, No 5, 1973.

9. Fridrich, G. and Schulz, G.: "Effektivitaet, wissenschaftlich-technische Revolution and sozialistische Wirtschafts fuehrung [Efficiency, Scien-tific and Technological Revolution and Socialist Economic Management," EINHEIT, No 2, 1973.

10. "Ukazatele hospodarskeho vyvoje v zahranici" [Indicators of Economic Development Abroad] Center of Scientific, Technical and Economic Information, Prague, 1976.

11. RABOTNICHESKO DELO, 21 March 1974.

12. Vahi, P.: "A szocialista orszagok gasdasat" [The Economic Cooperation of the Socialist Countries] NEPSZAVA, 24 December 1972.

13. The 14th Congress of the Communist Party of Czechoslovakia. Bratislava, PRAVDA 1971.

8805
CSO: 2400

CZECHOSLOVAKIA

CAPITAL REPLACEMENT PLANNING AFTER 1980 DISCUSSED

Prague INVESTICNI VYSTAVBA in Slovak Nos 2 and 3, 1980

[Article by Engr Karol Ujhazy, deputy chairman of State Planning Commission: "Improvement of Methods of the Planning and Reproduction of Basic Assets after 1980"]

[No 2, 1980 pp 35-38]

[Text] The present methodology of planning the reproduction of basic assets in general and capital investment specifically has gradually developed since 1970 simultaneously with the general methodology of planning. The area of capital investment was significantly affected by the documents discussed within the presidium of the CPCZ Central Committee and CSSR Government in 1972 and 1975.

The new elements in planning capital investments which were gradually introduced have exerted positive influence on the formulation and implementation of plans so far. Naturally, not all of them were and are equally effective. It would require a detailed analysis to determine when their lesser effectiveness is caused by the method itself and when only by lack of discipline on the part of those who should prepare and then implement the plans according to this method.

Let us mention at least a few examples: in recent years we have improved the methods of planning of projects included in the state plan by declaring more of them mandatory tasks. This has had a favorable effect: for the projects specified as mandatory tasks the plan of annual volume of construction work and delivery of machinery was either surpassed or at least fulfilled. Yet, even in this category of projects the deadlines set for putting capacities into operation were not met, and as a result the annual plan targets were met to an extent varying from 55 to 80 percent. We have developed a special method of planning the scope of unfinished projects. This method is perhaps not to blame for the fact that we did not succeed in reducing the scope of unfinished projects during the Fifth and Sixth Five-Year Plans to the rate specified in the party and government documents for these five-year plans.

In recent years we have also gradually improved the balance in interlinking the plans of capital investment to other parts of the plans and particularly to the plans of contractors for capital investment projects. Again, this improved methodology is not to blame for the fact that the contractors surpassed the deliveries for the projects with RN [budget costs] below Kcs 2 million, but did not fulfill the planned volume of deliveries and work for projects with RN exceeding Kcs 2 million during the Fifth and Sixth Five-Year Plans.

The improvement of methods of planning the reproduction of basic assets must be based also on facts such as deterioration of indicators characterizing the effectiveness of the reproduction process during the Sixth Five-Year Plan. The analyses have revealed that during the current five-year plan we need more basic assets per koruna of both social product and produced national income. The basic assets per man ratio and particularly the machine per man ratio has been increasing much more rapidly than labor productivity, and the effectiveness of basic assets in the entire production sphere has deteriorated in comparison with the Fifth Five-Year Plan.

The improvement of planning methods in every area--and thus here, too--has been necessitated by development itself. After all, we shall carry out projects this year and also in the future which are more demanding than anything we undertook in the past. Let us mention at least the nuclear powerplants, the complex of projects related to mining of brown coal in the North Bohemian basin and the comprehensive solution of problems faced in Prague and Bratislava. The predesign preparation and supplier-customer relations are becoming more demanding; bigger demands are laid on the organizational work of contractors particularly at the construction sites. If the plan is to perform its function and become the basic tool of management, we must constantly improve its methodology in accordance with the increasingly demanding nature and scope of capital investment.

The measures for planning and managing basic assets were worked out in 1977 and 1978, and resulted in the CSSR Government resolution No 23 of 1 February 1979 on measures for planning and managing basic assets. By the end of 1979 the work was completed on the set of measures for improving the system of planned management of the national economy after 1980. This document incorporated the measures based on the CSSR Government resolution No 23/1979 either without change or in a modified form corresponding to the application of these measures in the area of planning last year.

Just as in previous years, the planning of capital investments and the reproduction of basic assets must take these fundamental directions:

--the drawing-up of plans and the system of their indicators must be improved so that the higher economic effectiveness of the reproduction of basic assets is built into the plans;

--throughout the entire process of preparing and implementing plans the principal emphasis must be on the higher efficiency of existing basic assets, their effective reconstruction and modernization, better utilization in terms of time, and better coordination between the reproduction of basic assets and reproduction of the labor force;

--the methodology of plans must be improved to create better conditions for the continuity of work and deliveries in the specified structure.

Program Approach to Long-Term Plans

By its very essence capital investment is long-term in nature, and undoubtedly transcends the scope of the annual plan. This is also true of the medium-sized project, if we take into account the entire cycle of preparation--beginning with scientific-technical development and research through predesign and design preparation, implementation of the plan and putting capacities into permanent operation in accordance with the specified parameters. The expansion and actual construction of design capacities, the development of supplier--both building and mechanical--capacities require a long-term approach. If national economic planning is to be a continuous process, it must be based on long-term plans.

In May 1979 the government approved a general program of work on the long-term estimate of CSSR development up to the year 2000. The work on the long-term estimate of the CSSR economic and social development should be carried out in the following stages.

During 1980, in which the main emphasis will be on the preparation of the Seventh Five-Year Plan, it will be necessary to prepare the documentary material on the main tasks and directions of development up to the year 2000 as well as on the basic technical and economic conditions of this development. Forecasts will be provided for the application of scientific-technical achievements together with the forecasts of selected (internal and external) prerequisites and potential directions of economic and social development up to the year 2000. This documentary material should be made part of the preparation for the 16th CPCZ Congress and the basis for further work on the long-term estimate.

In the following stage, up to 1983, it will be necessary to work out the so-called long-term comprehensive programs--the long-term developmental concepts for the main sectors and areas. They should reflect a better program approach to long-term planning. This work should prepare the ground for the concepts of cross-section nature. Already at this stage the desirable structural changes in economic development should be verified in order to make our economy more adaptable to the changed world and domestic conditions of development.

The work during the subsequent stage, that is approximately during the 1984-1985 period, should concentrate on working out a comprehensive draft of the long-term estimate which should also include the breakdown by five-year plans (and particularly the Eighth Five-Year Plan) and outline also the ways for multilateral or bilateral coordination of long-term estimates with other CEMA countries. This work should then be organically linked to the preparation of guidlines for the Eighth Five-Year Plan, as well as to this plan itself.

The government formulated the principles which must be observed in processing of the long-term estimate. It emphasized that this work must be based on the resolutions of the 15th CPCZ Congress and related plenary meetings of the CPCZ strategic goal--the increase in the living standard and consolidation of social securities of the population on the basis of the continuous and effective development of the national economy.

The basic forecasts should be worked out and evaluated already in the second half of this year. The forecasting activity should be developed in the fundamental directions such as:

--the development of socialist society and particularly of the socialist way of life up to the year 2000;

--the demographic development and migration of the population including anticipated implications for social-economic and regional development;

--exploitable mineral sources, both ore and non-ore raw materials and the main directions of their most effective utilization;

--water sources and conditions for their conservation;

--external conditions for CSSR economic development.

All this work must be coordinated with the work on the development of science and technology, and the application of their achievements. Major investment programs should be linked in the long-term plans also to the implementation outputs of technological development.

From the long-term standpoint, it will be necessary to work out selected key demanding programs all the way down to individual construction projects. Among such programs, for example, is the construction of nuclear powerplants in the next 10-15 years. The selection of building sites for these powerplants makes it necessary to develop such a program long in advance. A similar example may be also the general line of housing construction up to the year 2000. It has become clear that the implementation of programs such as electrification of railroads and construction of the superhighway and subway in Prague requires a more detailed clarification of the basic concept for a period longer than the five-year plan.

It is assumed that during the first stage of work on the long-term estimate--apart from the directly participating central agencies--the bulk of work will be carried out by the research institutes or specialized centers dealing with specific problems.

Program Aproach to Five-Year Plans

This approach has been specifically manifested in the announcement of state target programs. The state target programs are to replace the key expansion programs used in the Fifth and Sixth Five-Year Plans. Their concept is

somewhat broader than the concept of key expansion programs. They should enhance the present program approach to planning. This is necessary to emphasize only because in recent years the views have been expressed that this involves the introduction of program planning. The government has approved the selection of state target programs for the preparation of the Seventh Five-Year Plan.

The program approach was also employed in the present planning practice and was gradually improved, particularly for the period of the Fifth and Sixth Five-Year Plans. The processing of key expansion programs, as well as of phaseout programs, can be regarded as a target program approach. The mistake of key expansion programs may have been that there were too many of them (approximately 40), and that they did not cover an equal share of production in every sector. Their broad scope prevented the desirable concentration of material resources for their implementation. From the standpoint of preparation and implementation, these programs covered individual sectors only and lacked consistent intersector interlinking in preparation and implementation.

Taking this as the point of departure, the state target programs must aim at achieving the highest social effect in individual ministries and sectors within the shortest possible time by the coordinated effort of all interested organs and organizations which must participate in the preparations and implementation of programs.

The state target programs are designed to give concrete form to the application of scientific-technical achievements and to ensure the necessary coordination between the outputs of scientific-technical development on the one hand, and the state national economic plan in selected areas on the other. They should ensure the implementation of only selected key economic plans in order to leave sufficient room for the comprehensive accomplishment of goals of economic policy as a whole. They should also incorporate the present phase-out programs and integration programs within the framework of the CEMA countries.

As to the work procedure, it was decreed that the initial work on the state target programs should be organized in the form of so-called tentative programs. On the basis of the adopted and approved tentative programs, the program project will be worked out for which the coordinating ministry, in cooperation with other central organs, will always be responsible. A summary report for the CSSR Government will then be prepared by SPK [State Planning Commission] in cooperation with FMTIR [Federal Ministry of Technological and Investment Development], CPK [Czech Planning Commission], SIPK [Slovak Planning Commission] and coordinating ministries in the course of work on the Seventh Five-Year Plan.

The state target programs will become part of the Seventh Five-Year Plan and in their final form will be approved as an integral part of it.

The tasks ensuring from the state target programs for capital investment will be handled in all construction projects with RN exceeding Kcs 10 million as centrally supervised projects [CPS] or as mandatory tasks of the state plan.

Smaller projects and the demands of SZNR [machinery and equipment not covered by the budget] will be detailed by the ministries for VHJ [economic production units] and enterprises. It is necessary to point out that the state target programs should not be implemented exclusively by new investments, by new construction projects. The emphasis should be on the more effective utilization of existing capacities, their possible reconstruction or modernization. The principle of econmic effectiveness naturally applies also to the investment projects which will be an integral part of state target programs.

Should tendencies occasionally appear to magnify the scope of investment projects necessary (or rather more easily approvable, if they become part of state target programs) for achieving the objectives of state target programs, it is necessary to point out that an incommensurate "inflation" of capital investment projects undoubtedly reduces the economic effectiveness of the program as a whole. We must also emphatically stress that the tasks of target programs will constitute an integral part of the five-year plan and thus gradually also of the operational annual plans. They can therefore be dealt with only to the extent to which they will become part of the respective plans. The emphasis, however, must always be on the comprehensive implementation of the program.

In connection with the state target programs, the responsiblity of the scientific research base also is increased for the prompt transmission of the documentary material and research achievements to practice as required by the programs involved. The responsibility for the implementation of approved state target programs will be borne by individual central organs and collectively by the coordinating central organs assigned this role by the government. These central organs will also exert collective control over and monitor the implementation of programs.

The planning of capital investment will be further enhanced by the fact that the state-appointed experts will participate already in the preliminary evaluation of investment projects. Although their elaboration has been delayed and lags behind the original schedule (see for example government resolution No 53/1979), the central (including planning) organs already have at their disposal approximately 65 percent of tentative capital investment projects which will be started in the first 3 years of the Seventh Five-Year Plan. Their quality, however, still varies considerably. The evaluation of the set of approximately 120 projects in the production sphere (excluding the fuel and power sector) has revealed that the indicators used in many investment projects to be started during the Seventh Five-Year Plan do not meet the demanding requirement of investments' profitability. Many investment projects will have to be revised, or to put it more accurately, many present concepts of proposed projects will have to be reviewed. A correct branch structure of investments will certainly determine the economic effectiveness of investment projects to be carried out during the Seventh Five-Year Plan.

However, even the best branch structure, if it consists of projects with a low level of economic effectiveness, cannot in its sum produce anything else but a similarly ineffective whole.

The plans for new investment projects submitted to the government for approval in recent years have also included indicators of production capacities in the structure which is customary in the present methodology of evaluation of economic effectiveness of investments as well as in the examination by the state-appointed experts and registration. In the methodology of planning we shall gradually improve this system as the rules for the evaluation of economic effectiveness of investments are amended (this involves a revision of the FMTIR decree).

The completion of the system of technical-economic indicators (THU) for production and nonproduction investments should contribute to greater effectiveness of investments and to the improvement of investment planning generally. It is necessary to apply good experiences with THU also to housing construction. This is related also to the wider application of standardization.

Better Utilization of Basic Assets

To make the entire reproduction process of basic assets more effective, it will be necessary more consistently to apply and in economic practice to enforce the orientation to the better utilization of existing basic assets and their progressive modernization. Likewise, preference must be given to those investment projects with shorter recovery periods which aim at savings of fuel and energy, labor and at the solution of foreign trade problems. While observing this principle, the methodology now in preparation for planning investments after 1980 establishes the criteria for all progressive modernizations and rapidly recoverable investments included in the plan (that is for projects with RN both above and below Kcs 2 million as well as for SZNR).

As progressive modernizations and rapidly recoverable investments will be regarded effective and rapidly recoverable modernization projects, projects involving application of technical achievements, innovation of products and rationalization of the production process which are designed to replace, modernize and, in special cases, also to augment existing machinery. Their basic condition, however, will have to be also that they will not reduce but rather increase the number of shifts worked. The modernization projects must meet one of the following conditions:

--the costs' recovery period will be shorter than half of the depreciation period, but not longer than 8 years (in this as well as in all other instances we have in mind only the period specified for depreciation of the machinery and technological parts);

--the period in which new products will become profitable must be shorter than one-third of the depreciation period, but not longer than 4 years;

--in absolute savings of fuels, energy and motor fuels, the recovery period must be shorter than four-fifths of the depreciation period;

--in absolute (please note: not relative) reduction of labor force, the recovery period must be shorter than two-thirds of the depreciation period;

--repayment of foreign exchange spent on the purchase of imported machinery and equipment must meet the conditions specified by the Czechoslovak State Bank for granting foreign exchange credits.

After experiences gained during the Sixth Five-Year Plan, we shall observe also in the Seventh Five-Year Plan the principle of programmed, well-rounded and more effective utilization of assets planned in the category of projects with RN below 2 million Kcs and SZNR. Just as in the 1980 plan, we shall emphasize well-rounded, particularly modernization and replacement programs. We want to specify as mandatory also the proportion of SZNR and projects with RN below 2 million Kcs aimed at modernizations.

Planning of Interrelated Projects

Increased attention will be paid in the preparation of the Seventh Five-Year Plan to the planning of necessarily interrelated investment projects. These are projects related to mining or specific production activity affecting the living environment. The projects with RN exceeding 50 million Kcs will be specifically (irreplaceably) entered in the lists of new projects constituting part of the state plan.

In the methodological guidelines we establish the principle that the central organs may include in the draft of the plan mandatory or centralized projects necessitating capital investment in other sectors of the national economy only on the condition that such necessary investments will be discussed with the appropriate investor central organs, that they will be objectified and approved by the state-appointed experts already when the tentative construction projects are reviewed. We proceed on the principle that these necessarily interrelated investment projects will be planned also in the future by the organizations which will use or operate the newly-constructed capital assets. We anticipate a similar procedure for the category of other projects which the central organs will have to discuss separately and then include in the captial investment plan.

We regard the objectification of the scope of these necessarily interrelated investment projects as particularly important. Some criteria are clear: if for example some installations (railroad tracks and so on) are disrupted by the expansion of mining in the surface quaries and new structures must be constructed in their place; or in the instances when, because of undermining, existing buildings and structures must be relocated. In this category, the scope of new structures is not always identical with the former ones because the new structures usually are bigger and of better quality.

More complex and--let us admit--sometimes conflicting cases arise in the construction of new nuclear powerplants, cemer plants, some chemical plants and so on. For example, the requirements of investment projects interrelated (or interdependent) with the construction of nuclear powerplants increase almost at the geometric ratio as new construction sites open for these power-plants. We hope that by the objectification of examination by the state-appointed experts these problems also will be solved in such a way that the identical approach could be applied to every building site.

Better Conditions for Investment Projects

The improved methods of planning will create better conditions for the preparation and implementation of investment projects. For capital investment it is desirable to further strengthen the position of five-year plans as the basic tool of management in the preparation of projects and their actual construction. Within the assigned tasks and specified limits for the entire five-year period, we want to prepare the detailed lists of selected construction projects in the following manner: the lists will be more exhaustive and more mandatory for the first 3 years, but only of a tentative nature mainly for the remaining 2 years. This approach, however, must be differentiated by individual sectors and the nature of construction projects. For example, the construction of new nuclear powerplant will be set as a mandatory task even if it is to be started in the last 2 years of the five-year plan. These lists particularly for the last 2 years will be defined with more precision in the annual operational plans. We presume further that, despite the relative stability of five-year plans, we shall allow for counterplanning in the annual plans in which we shall specify the scope of construction starts not only for the current year, but also for the 2 subsequent years.

The tasks will be detailed--concurrently for the investors and contractors--in the annual operation plans. The assignment of tasks will have the following basic structure:

--The deadlines for putting capacities into operation including the intermediate deadlines for and completion of construction projects.

--deliveries to capital investment projects generally, including specifically:

--the projects designed as mandatory tasks;

--the projects with RN exceeding 2 million Kcs.

This principle must be consistently observed in the detailing of the plan all the way from the ministries to VHJ to enterprises, that is to the direct investors and contractors. This will also result in the more consistent evaluation of the plan fulfillment and ties to the material incentives for the leading technical-economic workers as well as for the enterprises and work collectives.

Not only in the five-year plan, but also in the operational plans attention will be paid to the closer links between the capital investment plan and other parts of plans. We have in mind not only the financial plan, but also the production plan and work plan. It is important for the ministries, VHJ's and enterprises to maintain these ties. For example, production should be separately planned for the new capacities which will be put into operation in the given year, and in the next few years also for those capacities where the production increase still follows the "running-in" chart (nabehova krivka). Particularly in the detailing of the plan by the ministries for VHJ and by VHJ for the enterprises, the general methods of detailing of certain parts of the plan such as work plans will have to be replaced by the specification of the number of workers who will operate the capacities to be put into operation. If there is to be a labor force available for these capacities acquired by the discontinuation of certain operations, the plan of production discontinuation must be coordinated with the plan of putting these capacities into operation again.

In recent years, we have gradually improved the mutual ties between the capital investment plan and contractors' production plans. We must make another small step in this direction now.

The so-called "chess-board balances" of construction work and deliveries of machinery and equipment which we have used in the years of the Sixth Five-Year Plan are to be improved for the period of the Seventh Five-Year Plan. Also in the future we shall determine the balances of the total scope of work and deliveries to be carried out by one supplier sector for individual investors--in the breakdown into work and deliveries to mandatory projects and projects with RN exceeding 2 million Kcs. The difference gives the scope of deliveries to the projects with RN below 2 million Kcs and SZNR.

These "chess-board" balances have become in recent years the practical tool of planning and management for central investors and central supplier organs. It seems, however, that it is time to make another step forward in the sense that these balances should be detailed for VHJ's and then by VHJ's for the enterprises. This detailing should pay special attention to planning of subdeliveries in construction work and to better planning of final or partial subdeliveries of machinery and equipment. We are aware that this will not be a simple process, but a beginning must be made. The logical width of indicators in the form of a pyramid applies also to the "chess-board" balances: a system of indicators broadening from the supreme management organs on the top all the way down to direct investors and direct contractors. This method also should prevent the supplier and particularly construction enterprises from contracting more work than can be included in the investors' plans and total capacities of supplier enterprises according to the final plan (we have in mind the annual plan in particular).

For the period of the Seventh Five-Year Plan (and for 1980, too), the number of centrally balanced items is increased. Let us quote at least a few figures on the past development. While there were 115 centrally balanced products in 1971 and 163 in 1976, there will be 676 products by 1980 (also

in the preparation of the Seventh Five-Year Plan). We know that not all of these products and material are direclty linked to capital investment. Nevertheless, the number of centrally balanced products and materials which constitute part of capital investment in 1980 has almost doubled in comparison with 1976.

It is anticipated that of this total number of products 341 will be centrally balanced in the state plan (processed by SPK), 251 of which will be specified as mandatory and 90 as tentative projects, 117 by the central organs and 218 by VHJ or other levels of management.

In order to ensure domestic capital investment and export of complete industrial plants, principles have been adopted for balancing selected self-contained complexes of machinery. For the draft of the Seventh Five-Year Plan the nomenclature has been approved of 19 selected complete sets of machinery--deliveries of technological equipment for: steam powerplants; nuclear powerplants; hydroelectric powerplants; heat plants; incinerators for community refuse; coking plants; rolling mills; steel and alloy foundries; waste-water purification plants; coal surface mines; fuel-based crude oil refineries; oil-based crude oil refineries; tire plants; breweries; cement plants; brick plants; forging shops; repair shops for trucks and spinning mills.

The methodological procedures for material balancing of complete sets of machinery have also been worked out and agreed upon. This balancing is based on the past experience in planning of projects specified as mandatory. The role of general contractors has increased accordingly. Should it seem that 19 complete units is a relatively small number, let us point out that even this selection involves a great deal of rather demanding work which still must be substantially improved particularly on the part of final suppliers and subcontractors of individual parts of machinery or materials. Let us not forget either that we have practically verified so far primarily the operational plans, that is the plans for the next year and 2 following years. In this case, however, the period is extended to cover the entire five-year plan. The balancing of complete industrial plants is also closely related to the above-mentioned increase in the number of centrally balanced items. This should ensure the delivery of key subassemblies, complementary products such as pumps, armatures, cables, conductors and so on.

The improvement of the general situation in material-technical supply, however, poses a greater problem. Despite the above-mentioned increase in the number of centrally balanced items and simultaneous balancing of complete industrial plants, the supplier-customer relations will still be of key importance. The entire investment process depends on timely and good supplier-customer relations on the one hand, and adequate expansion of capacities for manufacture of products now in short supply, which are necessary for capital investment, on the other.

[No 3, 1980 pp 75-77]

Regulation and Classification of Unfinished Projects

The measure for planning and managing basic assets as approved by government resolution No 23/1979 deal with the problem of unfinished projects comprehensively. This is correct because the increasing scope of unfinished projects was one of the weak points of our capital investment in the Fifth as well as in the Sixth Five-Year Plans.

Insofar as we speak of the scope of unfinished projects, we have in mind the relation between the remainder of budget costs representing a work reservoir (zasobnik prace) to be done the next year (or period) and the potential annual volume of investments in this set of projects in RN which exceed Kcs 2 million. Under the present methodology, this represents approximately 40 percent of our capital investment in which we thus regulate the scope of unfinished projects. We have already explained these principles in our periodical and do not therefore deem it necessary to do so again.

While the scope of unfinished projects was reduced during the Fifth Five-Year Plan (though by less than 40 percent of the target set by the 14th CPCZ Congress), it has stagnated on the first year's level during the Sixth Five-Year Plan. Due to the more radical 20-percent reduction of construction starts, the 1980 plan creates conditions for a potential 8-percent reduction of the scope of unfinished projects in the first year of the Seventh Five-Year Plan (provided, of course, that the 1980 plan targets are met).

From the methodological standpoint, the scope of unfinished projects can be summarily expressed either by the unfinished projects' coefficient or by the average construction period derived from it. If we then say that the scope of unfinished projects has stagnated on the first year's level during the Sixth Five-Year Plan, this means the values of both the unfinished projects' coefficient and average construction period have remained virtually unchanged. This methodology, however, has a loophole in that it does not take into account the changes in the average size of construction projects. The average size of construction projects increased by approximately 50 percent during the Fifth Five-Year Plan, while their approximately 40 percent increase is anticipated for the period of the Sixth Five-Year Plan. This means that, while maintaining identical values of the coefficient of scope of unfinished projects and average construction period, the scope of construction projects carried out in 1980 will be 40 percent larger than in the first year of the current five-year plan. In other words, we shall build 40 percent more during the same construction period. The objection can, of course, be raised that these indicators are derived from the value indicators--namely RN--which conceal the price increases. In other words, it does not necessarily mean that the construction volume will be materially 40 percent larger. But let us leave these speculations to experts more competent in the analyses of price changes in capital investment.

This loophole in the methodology of regulation of the scope of unfinished projects should definitely be filled in the future. As of now, we still do not have any proposals for this. We hope, however, that future evaluations of the scope of unfinished projects will take this fact into account.

Already in conceiving the measures for planning and managing basic assets in 1977 and 1978 we were aware of what was confirmed by the report submitted by the presidium of the CPCZ Central Committee to the 14th plenary session of the CPCZ Central Committee in December 1970. This report stated that one of the basic tools of regulating the scope of unfinished projects was the investment plan which, by regulating construction starts, planning construction volume and remainders of budget costs, must create the fundamental conditions for future development.

The solution of the problem must also be facilitated by measures in the financial system (the problem of more consistent billing of individual structures has already been studied for several years) and in the area of material incentives, particularly for contractors, designed to expedite the completion of projects. The measures based on the government resolution No 23/1979 furthermore call for:

--improved management of construction work and assembly at building sites;

--improved quality and more flexible management of the material-production basis of construction;

--greater possibility of enforcing compliance with the specific progress and final construction deadlines as specified in the contracts;

--gradual objectification of standards of construction deadlines including more accurate objectification of construction progress;

--completion of construction projects with a major portion of machinery and equipment imported from abroad within the deadlines customary in the countries from which this machinery and equipment will be imported.

We are of the opinion that this broader approach to the solution of the problem is the only correct one possible. The development of Czechoslovak capital investment in the last 30 years has indeed provided the best evidence that whenever in the past (1952-1953, 1962-1963 and partly also in 1970) radical measures were taken only to limit construction starts, without a more comprehensive concept, they did not positively affect the scope of unfinished projects. Almost the exact opposite happened: the more radical these one-sided measures were (for example in 1962 and 1963, when construction work on unfinished projects was brought to a temporary halt), the worse were the implications not only for the increase in supplier's capacities, but also for the effectiveness of the entire construction process in capital investment.

To sum up: under our conditions, even with more radical measures in regard to construction starts, the scope of unfinished projects can be reduced (and construction periods shortened only to the extent to which we shall succeed

in concentrating operations and deliveries on specific building sites, and achieve progress in construction work by adequate supplying the required machinery and its assembly. This will call for more demanding methods of management on the part of construction workers without the possibility of transferring people, machinery and equipment from one building site to another just in order to comply with the comprehensive enterprise qualitative indicators. On the part of workers in engineering industires, this will require concentrated efforts to make deliveries of machinery to specific construction projects and demanding work organization in its assembly according to higher supplier forms instead of surpassing deliveries to SZNR.

In the following part of this article, however, we would like to concentrate only on those improvements which must be incorporated in the methodology of planning precisely in order to achieve more effective regulation of the scope of unfinished projects. Closely related to this question is the problem of categorization of construction projects (although such an approach may seem unusual to many).

As to the regulation of the scope of unfinished projects, the capital investment plan must distinguish two basic categories of investment projects.

--investments and construction projects to be completed within a short period: these projects should be essentially implemented within 1 year (but should not take more than one-and-a-half years). Among them are all SZNR regardless of the costs involved. This category also includes individual pieces of machinery the cost of which amount to several thousand korunas such as the purchase of the latest passenger planes (the price of each exceeds Kcs 100 million). Other items in this category are the construction projects with RN not exceeding Kcs 2 million. The labor reservoir in the construction projects carried on from 1 year to another does not have, in its sum, a substantial effect on the predetermination of the labor front of suppliers to the construction sites during the subsequent period.

Construction projects with a longer cycle of implementation which are to be completed on the average within 4.5-5 years. Under our present methodology, this category includes construction projects with RN exceeding Kcs 2 million. The scope of unfinished projects here must be regulated by the decisions on construction starts, on concentration or potential volume of investments on these projects. At the same time, the initial remainders of RN as the labor reservoir for the respective year must be taken into account. By the comprehensive approach to all three indicators, the plans make decision of the future predetermination, on the future labor front as well as on the general orientation of the plan as a whole, including its branch structure. This category of construction projects must employ design documentation and time plans worked out according to it, and firm construction schedules. Moreover, attention must be paid to contractors' possibilities and accumulation of construction work in the required structure. The supplier-customer relations, which constitute the basis, will have to be confirmed or modified in the plans. The scope of this work varies at individual levels of management and must take into account the breakdown into three basic groups of this category of construction projects:

--projects specified as the mandatory tasks of the state plan;

--centrally supervised projects (CPS);

--other projects with RN exceeding Kcs 2 million.

The category which we call construction projects with a special system of regulation somewhat defies this basic breakdown of the plan. When this system was first introduced, it included only comprehensive housing construction (KVB). This catgeory was gradually extended, particularly during the Fifth Five-Year Plan, to include the construction projects of lineal nature--such as transit gas pipeline, the subway in Prague, laying of telecommunication cables, construction of the freeway and selected highway network, construction of workings in the underground mines and some others. This was because the system of regulation based on the RN remainders, limits on construction starts and total investment volumes did not always take into account the specific nature of these construction projects. The scope of unfinished projects in this area was then essentially regulated by specific lists of construction starts and (not to be exceeded) annual volumes specified for example for individual sections of subway or freeway network or by the system of gradual phases of preparation of firm construction schedules for housing construction. This category of projects gradually increased. In recent years, it has represented approximately 25 percent of the total volume of investments in the national economy. The plan in this category is fulfilled better than on the construction projects with RN exceeding Kcs 2 million (with the exception of KBV in recent years). As we have already pointed out above, the total scope of unfinished projects is not smaller than for projects with RN exceeding Kcs 2 million.

As to regulating the scope of unfinished projects during the Seventh Five-Year Plan, we deem it correct to emphasize the basic breakdown of investment projects--that is, the division into projects with RN below Kcs 2 million and SZNR, and projects with RN exceeding Kcs 2 million. We regard it as expedient and in this stage also as already feasible to return to the original system, that is to apply special regulation only to KBV.

From the standpoint of decisionmaking it will be advisable to maintain in the future as well the present division of authority between the governments and central organs. For this reason, the government will continue to specify certain projects as mandatory tasks, that is to give orders to prepare and start these projects. We want gradually to increase the number of mandatory tasks from approximately 220-240 projects carried out in this category annually during the Sixth Five-Year Plan to approximately 350 projects during the period of the Seventh Five-Year Plan. This increase will necessitate the already mentioned projection of state target programs into the capital investment plan. Due to the additional work involved particularly in the central organs supervising the supplier organizations, we have abandoned the original intention of applying the work methods to all CPS and declaring them mandatory for the period of the Seventh Five-Year Plan.

The governments will continue to grant approval to the construction starts in the CPS category. Furthermore, the interchangeability of projects will not be permitted even within the total limits set for the construction starts. We are defining with more precision the criteria for placing projects into the CPS category. For example, the projects with RN exceeding Kcs 10 million which are provided for in the state target programs should be included in this category. The same applies to the projects with RN exceeding Kcs 20 million which implement the state plan of development of science and technology. The other criteria remain virtually unchanged.

As to the other projects with RN exceeding Kcs 2 million, the authority will have to be divided between the branch ministry of the VHJ and the enterprises. Probably no uniform rule exists for all sectors as to the measure of decentralization. With reference to specific conditions of individual VHJ's, this division of authority will have to be properly delineated in every sector. The division of authority will have to be worked out also for the category of projects with RN below Kcs 2 million and SZNR. For example, even today the decision on the purchase of computers is not made either by VHJ's or enterprises, but by the supervising ministries in cooperation with FMTIR and SPK.

The measure of centralization or decentralization will be expedient to define with reference to financing of investment projects and categorization of projects from the standpoint of their financing.

With reference to the financing of construction projects, the projects will be broken down into two basic groups also in the plan of investments:

--Projects specified as mandatory tasks of the state plan and centralized projects whose starts will require special government approval;

--Other projects with RN exceeding Kcs 2 million, and projects with RN below Kcs 2 million and SZNR. These projects will be collectively called investment projects with a limit. Their volume will be specified in the state plan by the total volume limit, but will be detailed by the ministries for VHJ in the form of standards for production of development funds. The central organs for each sector will have to create adequate reserves and see to it that the material limits specified by them for this category of investment projects and scope of unfinished projects (the limits set for construction starts and RN remainders) are not exceeded on other projects with RN above Kcs 2 million.

With regard to the catgorization of projects, we would like to point out in conclusion that the search for a uniform categorization of projects which would meet all requirements for regulating the scope of unfinished projects, the system of financing investment projects and the division of authority in the decisionmaking process resembles to a certain extent to the effort to find the "philosophers' stone."

Closely related to the methodology of planning investments and planning in general is the better coordination of the reproduction of fixed assets with the reproduction of the labor force. In the measure based on government resolution No 23/1979 a special section is devoted to this problem which considerably affects the effectiveness of the reproduction process. Due to its scope, this problem merits a separate article.

We hope that the changes in the methodology of planning of investment projects will create the conditions for better decisionmaking on the new investment projects as well as for their more rational implementation. We do not want to overestimate the importance of the proposed improvements. We know that the methodology of planning can only create conditions, while the results in the future will depend upon rather complex specific practice in the preparation and implementation of investment projects.

10501
CSO: 2400

END